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EXAMINER	
HAJNIK, DANIEL F	
ART UNIT	**PAPER NUMBER**
2628	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,203	SAINT-HILAIRE ET AL.	
	Examiner	Art Unit	
	Daniel F. Hajnik	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16 and 30-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-16 appear to be directed to an abstract idea rather than a practical application of the idea. The claimed invention does not result in a physical transformation nor does the claimed invention appear to provide a useful, concrete, and tangible result. Specifically, the claimed invention does not appear to produce a tangible result because merely "receiving ... a motion command", and "updating a frame buffer" are nothing more than thoughts or computations within a processor. It fails to use or make available for use the result of the method to enable its functionality and usefulness to be realized. Additionally, the asserted practical application in the specification of the method is displaying a computer graphics image on a display screen, which is not explicitly recited in the claims nor does it flow inherently therefrom.

Claims 30-34 is/are directed to non-statutory subject matter. That is, the claims are directed to a data structure, which is a data structure, per se. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other

claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program to execute instructions defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

To expedite a complete examination of the instant application, the claimed rejected under 35 U.S.C. 101 as non-statutory subject matter are further rejected as set forth below in anticipation of applicant amending the claims to place them within the four categories of invention.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-11, 15-21, 24-27, and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Merrill et al. (US Patent 6,369,821).

As per claim 1, Merrill teaches the claimed:

1. In a device *(col 5, line 41, "one or more clients 102-106")* comprising an image cache *(col 14, line 52, "a local storage cache")*, a method comprising;

receiving, from another device, a motion command *(col 5, lines 40-41, "an animation server 100, which controls the playback of animation" where this control can include commands and col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface" and col 21, line 30, "a commands object 362")*, wherein the motion command, without including pixel values generated by the another device, directs animation of an image object stored in the image cache over a time period *(col 4, lines 40-43, "The animated character moves on top of the desktop and each of the windows of the executing applications. As the character moves about the screen, the animation system computes the bounding region of the non-transparent portion" and col 14, lines 51-53, "When a region for an animation frame needs to be rendered, the system will first look in a local storage cache of regions for a match" and col 14, lines 59-63, "The next time the region is required it can simply be read from the cache instead of being generated in real-time. Thus, the system gets the benefit of the pre-computed region without it having to have been downloaded", thus commands can be sent without pixel data when the pixel data is already in the local cache);*

updating a frame buffer of the device *(col 11, lines 27-28, "performs a bit-block transfer of this portion to the frame buffer for display the current frame of animation")* with the image object of the image cache over a the time period to animate the image object per the motion command *(col 14, lines 51-53, "When a region for an animation frame needs to be rendered, the system will first look in a local storage cache of regions for a match" and col 14, lines 4-6, "After the frame image is rendered to the display device, an operating system timer is set to go off in the amount of time specified by the frame's duration")*.

As per claim 2, Merrill teaches the claimed:

2. The method of claim 1 further comprising generating a video output signal representative of the frame buffer and the motion of the image object *(col 13, lines 31-33, "The animation is played by first rendering the uncompressed frame image data for the next frame to an offscreen video memory buffer" and col 3, line 63, "output device 30" and col 3, line 66, "display monitor" where a display monitor requires a video signal to work properly)*.

As per claim 3, Merrill teaches the claimed:

3. The method of claim 1 further comprising

receiving a background image from the another device *(col 5, lines 42-46, "During playback of the animation, the server relies on graphic support software in the underlying operating system 120 to create windows, post messages for windows, and paint windows and col 4, lines 66-67, "the color of corresponding pixels in the background bitmap". Thus, for animation playback the background image data can be transferred from the server to the client and displayed on the client)*,

storing the background image to a background buffer *(col 9, lines 30-32, "The loader constructs a composite bitmap by performing bit block transfers from the decompressed bitmaps to an off-screen buffer" where part of the off-screen buffer can be a background buffer where background pixels are stored. This is because the animation is drawn overtop the background, thus in order to form a composite bitmap, some background data is used and maybe loaded from an offscreen buffer)*, and

updating the frame buffer with the background image prior to updating the frame buffer with the image object *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

As per claim 4, the reasons and rationale for the rejection of claim 3 is incorporated herein. Merrill teaches the claimed:

decompressing the background image *(col 4, lines 66-67, "the color of the corresponding pixels in the background bitmap" and col 13, lines 23-24, "If the image bits are in a compressed format they are decompressed")* and

storing in a decompressed form *(col 13, lines 31-33, "The animation is played by first rendering the uncompressed frame image data for the next frame to an offscreen video memory buffer").*

As per claim 5, Merrill teaches the claimed:

5. The method of claim 1 further comprising

receiving the image object from the another device *(col 14, lines 43-45, "incremental downloading of animation data over low bandwidth communication lines")*, and

storing the image object in the image cache *(col 14, lines 57-59, "If the region is not found, it is generated in real-time and used as described above. However, after the region is used it is saved to the region cache on disk").*

As per claim 6, this claim is similar in scope to claims 4 and 5, and thus is rejected under the same rationale.

As per claim 7, Merrill teaches the claimed:

7. The method of claim 1 wherein

the motion command indicates first location, second location, and the time period *(col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface", col 10, line 66, "The first step is to position the region window at the appropriate location as specified by the frame's x, y coordinate in the frame data block" (first position) and col 22, "Move to—This method moves the animation to a specified location in screen coordinates" (second location) and col 14, lines 4-6, "After the frame image is rendered to the display device, an operating system timer is set to go off in the amount of time specified by the frame's duration" (a time period));*

updating the frame buffer with the image object comprises updating the frame buffer to animate the image object moving from the first location to the second location over the time period *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

As per claim 9, the reasons and rationale for the rejection of claim 7 is incorporated herein.

As per claim 10, Merrill teaches the claimed:

10. The method of claim 1 wherein

the motion command indicates a first scale, a second scale, and a the time period *(col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface", col 15, line 31, "to scale an animation", 15, lines 33-34, "when the scale of an animation changes" where it is*

required for a changing animation during scaling to have a beginning scale (first scale) and ending scale (second scale), and col 14, lines 4-6, "After the frame image is rendered to the display device, an operating system timer is set to go off in the amount of time specified by the frame's duration" (the time period)),

updating the frame buffer with the image object comprises updating the frame buffer to animate the image object transitioning from the first scale to the second scale over the time period *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

As per claim 11, the reasons and rationale for the rejection of claim 10 is incorporated herein.

As per claim 15, Merrill teaches the claimed:

15. The method of claim 1 further comprising receiving a cache management command from the another device, and updating the image cache per the cache management command *(col 14, lines 57-63, "However, after the region is used it is save to the region cache on disk. The next time the region is required it can simply be read from the cache instead of being generated in real-time. Thus, the system gets the benefit of the pre-computed region without it having to have been downloaded" where saving the region to cache is updating the image cache and this saving to the cache can be a cache management command).*

As per claim 16, Merrill teaches the claimed:

16. The method of claim 1 further comprising providing the another device with an indication that the device has completed the motion command *(col 22, lines 66-67, "Stop—Clients invoke this method to halt the current animation and play the next queued animation" and col 32, lines 37-39, "The server monitors for these client-specific commands as well as global commands and sends a notification to the appropriate client when it detects the input command" where this notification can be an indication).*

As per claim 17, Merrill teaches the claimed:

17. An apparatus *(col 1, line 64, "an animation server")* comprising

at least one processor to execute instructions *(col 3, line 34, "high speed processing unit (CPU)" where this can be included on animation server 100 in figure 3)*,

a network interface controller *(col 33, lines 46-47, "an Ethernet or other local area network technology wire and adapter card")* to transmit commands to a remote device *(col 33, line 39, "The remote computer network 452" and col 5, lines 41-42, "one or more clients 102-106 which request animation from the server")*,

a memory comprising a plurality of instructions that in response to being executed by the at least one processor *(col 10, lines 64-65, "the animation server has all of the components in memory that are necessary to display the next frame")*, result in the at least one processor,

loading the remote device with image objects *(col 14, lines 43-45, "incremental downloading of animation data over low bandwidth communication lines")*, and

transmitting one or more motion commands via the network interface controller to the remote device *(col 5, lines 40-41, "an animation server 100, which controls the playback of*

animation" where this control can include commands and col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface" and col 21, line 30, "a commands object 362" where these commands can be sent to the client), wherein the one or more motion commands, without including pixel values generated by the apparatus, request the remote device to animate one or more loaded image objects *(col 14, lines 51-53, "When a region for an animation frame needs to be rendered, the system will first look in a local storage cache of regions for a match" and col 14, lines 59-63, "The next time the region is required it can simply be read from the cache instead of being generated in real-time. Thus, the system gets the benefit of the pre-computed region without it having to have been downloaded", thus commands can be sent without pixel data when the pixel data is already in the local cache).*

As per claim 18, Merrill teaches the claimed:

18. The apparatus of claim 17 wherein the plurality of instructions further result in the at least one processor generating the one or more motion commands based upon one or more events generated by an application of the apparatus *(col 4, lines 31-32, "The animated character 60 can move anywhere in the user interface" and col 5, lines 57-58, "The operating system monitors input and notifies the server of input events relating to the animation").*

As per claim 19, Merrill teaches the claimed:

19. The apparatus of claim 17 wherein the plurality of instructions
further result in the at least one processor generating the one or more motion commands based upon one or more events received from the remote device via the network interface controller

(col 33, line 39, "The remote computer network 452", col 5, lines 41-42, "one or more clients 102-106 which request animation services from the server", and col 5, lines 57-58, "The operating system monitors input and notifies the server of input events relating to the animation").

As per claims 20 and 21, these claims are similar in scope to claims 7 and 10, respectively, and thus are rejected under the same rationale.

As per claim 24, this claim is similar in scope to claims 1 and 7, respectively, and thus are rejected under the same rationale.

As per claims 25, 26, and 27, these claims are similar in scope to claims 2, 7, and 10, respectively, and thus are rejected under the same rationale.

As per claim 30, the reasons and rationale for the rejection of claim 17 is incorporated herein. Merrill teaches the claimed:

30. A machine-readable storage medium comprising a plurality of instructions that in response to being executed *(col 5, line 40, "an animation server 100" and col 5, lines 47-49, "The memory system 26 generally includes a high-speed main memory 40 in the form of a medium such as random access memory (RAM) and read only memory (ROM)")*, result in an apparatus, determining to update a graphical user interface in response to one or more events *(col 4, lines 26-27, "an animated character located on top of the user interface" and col 5, lines 57-58, "The*

operating system monitors input and notifies the server of input events relating to the animation"),

As per claims 31 and 32 these claims are similar in scope to claims 7 and 10, respectively, and thus are rejected under the same rationale.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 8, 12, 13, 22, 23, 28, 29, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrill in view of Stern (US Patent 4,600,919).

As per claim 8, the reasons and rationale for the rejection of claim 7 is incorporated herein. Merrill does not explicitly teach the remaining claim limitations.

Stern teaches the claimed:

Image object moving along a curve *(in figure 10 where the image moves along a curve).*

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Merrill with Stern. Stern teaches one advantage of the combination, by teaching of generating realistic motion with minimal labor (an automated process using interpolation between key frames) (col 2, lines 7-13).

As per claim 12, Merrill teaches the claimed:

updating the frame buffer with the image object comprises updating the frame buffer *(col 11, lines 27-29, "Finally, the operating system performs a bit block transfer of this portion to the frame buffer to display the current frame of animation").*

Merrill does not explicitly teach the remaining claim limitation.

Stern teaches the claimed:

the motion command indicates a first rotation, a second rotation, and a the time period *(col 10, lines 33-36, "Each of the motion, rotation, and scaling parameters of the transformation matrices of the current joint are interpolated in the present invention, and this is done for each of the x, y, and z components" where this interpolation can occur between a starting rotation (first rotation) and an ending rotation (second rotation) over a period of time, i.e. over the frames shown in figure 10).*

It would have been obvious to one of ordinary skill in the art to combine this teaching of Stern with Merrill. The motivation of claim 8 is incorporated herein.

As per claims 13, 22, 23, 28, 29, 33, and 34, these claims are similar in scope to claims 12, 12, 8, 12, 8, 12, and 8, respectively, and thus are rejected under the same rationale.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Merrill in view of Richardson (NPL Document, "The RFB Protocol").

As per claim 14, Merrill does not explicitly teach the remaining claim limitations.

Richardson teaches the claimed:

14. The method of claim 1 further comprising receiving a capabilities command from the another device, and providing the another device with capabilities of the device *(page 7, section 5.1.1, first paragraph, "Handshaking beings by the server sending the client a ProtocolVersion message. This lets the client know which is the latest RFB protocol version number supported by the server" where this version number is part of the capabilities of the client)*.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Merrill with Richardson. One advantage of the combination is to increase the reliability of the system by ensuring adequate capabilities during interaction.

Response to Arguments

4. Applicant's arguments filed 12/27/2006 have been fully considered but they are not persuasive (in regards to the 35 USC 101 rejections). Applicant argues that claims 1-16 and 30-34 are statutory (page 12 of remarks). However, the amended limitations to store an image object in an image cache can still be just computations done inside of the processor and memory of the computer. The claimed method does not provide a real-world application. Further, the claimed method does not provide a concrete, and tangible result, i.e. displaying the image on a computer monitor. Thus, the claimed method can be an abstract idea and thus is non-statutory.

Further, in regards to claims 30-34, the claims recite merely a machine-readable medium, however, the claims do not require a computer-readable medium encoded with instructions

capable of being executed by a computer. Thus, these claims are non-statutory because they can be merely a data structure existing on a machine-readable medium.

Applicant's remaining arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel F. Hajnik whose telephone number is (571) 272-7642. The examiner can normally be reached on Mon-Fri (8:30A-5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka J. Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.H. 3/22/07

DFH

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